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Symbol	Name	Synonyms	Organism
LGR5	leucine-rich repeat-containing G protein-coupled receptor 5	FEX, GPR49, GPR67, G-protein coupled receptor 49, G-protein coupled receptor 67, GRP49, HG38, Leucine-rich repeat-containing G-protein coupled receptor 5 precursor, MGC117008, Orphan G-protein coupled receptor HG38	Homo sapiens

UniProt	O75473, Q4VAM0, Q4VAM2
OMIM	606667
NCBI Gene	8549
NCBI RefSeq	NP_003658
NCBI RefSeq	NM_003667
NCBI UniGene	8549
NCBI Accession	AAH36325, AAH99650

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In addition to two recently isolated mammalian LGRs (leucine-rich repeat-containing, G protein-coupled receptors), LGR4 and LGR5, we further identified two new paralogs, LGR6 and LGR7, for glycoprotein hormone receptors. [2000]

Recent studies indicated the evolution of an expanding family of homologous leucine-rich repeat-containing, G protein-coupled receptors (LGRs), including the three known glycoprotein [?] hormone receptors; mammalian LGR4 and LGR5; and LGRs in sea anemone, fly, and snail. [2000]

HG38 is most likely to be a receptor for a novel class of glycoprotein ligands. [1998]

Concept & Implementation by Robert Hoffmann

HG38 is most closely related to members of the glycoprotein hormone receptor subfamily with approximately 35% overall identity at the protein sequence level. [1998]

As with the glycoprotein hormone receptors, HG38 contains a long extracellular domain with a total of 16 leucine-rich repeats. [1998]

Comparison of overall amino acid sequences indicated that LGR4 and LGR5 are closely related to each other but diverge, during evolution, from the homologous receptor found in snail and the mammalian glycoprotein [?] hormone receptors. [1998]

The physiological role of an orphan G protein-coupled receptor [?], LGR5, was investigated by targeted deletion of this seven-transmembrane protein containing a large N-terminal extracellular domain with leucine-rich repeats. [2004]

LGR5 null mice exhibited 100% neonatal lethality characterized by gastrointestinal tract dilation with air and an absence of milk in the stomach. [2004]

The observed ankyloglossia phenotype provides a model for understanding the genetic basis of this craniofacial defect in humans and an opportunity to elucidate the physiological role of the LGR5 signaling system during embryonic development. [2004]

Gross and histological examination revealed fusion of the tongue to the floor of oral cavity in the mutant newborns and immunostaining of LGR5 expression in the epithelium of the tongue and in the mandible of the wild-type embryos. [2004]

In contrast to the restricted tissue expression of gonadotropin and TSH receptors in gonads and thyroid, respectively, LGR4 is expressed in diverse tissues including ovary, testis, adrenal, placenta, thymus, spinal cord, and thyroid, whereas LGR5 is found in muscle, placenta, spinal cord, and brain. [1998]

Moreover, introduction of mutant beta-catenin [?] into mouse hepatocytes in culture caused up-regulation of the Gpr49 mouse homologue. [2003]

Overexpression of orphan G-protein-coupled receptor [?], Gpr49, in human hepatocellular carcinomas with beta-catenin [?] mutations. [2003]

Radiation hybrid mapping placed HG38 into human chromosome 12q22-23. [1998]

Northern blot analysis showed that HG38 was expressed in skeletal muscle, placenta, spinal cord, and various regions of the brain. [1998]

In addition, expression of GPR49 induced transformation in a ligand-dependent manner and Knockdown of GPR49 mRNA level induced apoptosis in colon tumor cells. [2006]

However, we observed no induction of GS, GPR49 or GLT-1 in the five **inactivated** Axin1 tumors. beta-Catenin-dependent transcriptional activation in two Axin1-mutated HCC cell lines was much weaker than in beta-catenin-mutated cell lines. [2007]

These data therefore suggest that GATA-6 [?] also plays a role in chondrogenesis and that Gpr49 [?] is a potential direct **target** of GATA [?] regulation in this process. [2008]

Finally, we have identified conserved, canonical GATA [?] binding sites within the Gpr49 [?] gene locus, and show by EMSAs that GATA-6 [?] can bind to these sites in vitro. [2008]

The expression pattern of Lgr5 suggests that it marks stem cells in multiple adult tissues and cancers. [2007]

Thus, the aim of this study was to evaluate single-dose and steady-state bioequivalence of FEX 180 mg/PSE 240 mg 24-h compared with the individual formulations taken concurrently. [2005]

RESULTS: Pharmacokinetic parameters AUC0-infinity1 and Cmax1 following a single-dose (Day 1, dose 1), Cmax7, AUC0-24(7) at steady-state and Cmin7 measured at the end of the dosing interval (Day 9, dose 7) revealed bioequivalence between FEX 180 mg/PSE 240 mg combination tablet and the individual components taken concurrently. [2005]

Identification of stem cells in small intestine and colon by marker gene Lgr5. [2007]

The Lgr5-positive crypt base columnar cell generated all epithelial lineages over a 60-day period, suggesting that it represents the stem cell of the small intestine and colon. [2007]

The levels of expression of N-acetylglucosamine-6-O-sulfotransferase [?] (GN6ST), protein tyrosine phosphatase receptor M (PTPRmu), G protein-coupled receptor 49 (HG38) and KIAA1099 protein were determined in childhood precursor-B ALL samples from a cohort of 116 Indian patients. [2006]

CONCLUSIONS: These findings demonstrate that the pharmacokinetics of the new 24-h FEX 180 mg/PSE 240 mg combination formulation are bioequivalent to the concurrent administration of the individual drug components. [2005]

OBJECTIVE: A 24-h extended-release formulation of fexofenadine HCl 180 mg/pseudoephedrine HCl 240 mg (FEX 180 mg/PSE 240 mg) has recently been approved by the US Food and Drug Administration for symptom relief of seasonal allergic rhinitis, including nasal congestion. [2005]

Seventh to tenth generation NPFs were cultured with or without 1 microg/ml lipopolysaccharide (LPS) in the presence of various concentrations of FEX. [2004]

The influence of fexofenadine hydrochloride (FEX; CAS [?] 138452-21-8) on the production of eosinophil chemoattractants, RANTES ◇ and eotaxin ◇, from nasal polyp fibroblasts (NPFs) was examined in vitro. [2004]

Simultaneous urodynamic, neurophysiological, and radiological examinations employed during our studies enabled us to determine changes in these parameters due to FEX. [1976]

We also show that the G-protein coupled receptor [?], Gpr49 [?], is a target of GATA-6 [?] regulation in differentiating embryonal carcinoma cells and that, in vivo, the expression domains of the two genes overlap within PCCs. [2008]